

Amendments to Drawings

The Examiner has objected to Figure 1 because hand-written text. Applicant has submitted herewith a Replacement Drawing for Figure 1. Applicant has replaced the hand written text with type written text in Figure 1.

REMARKS

This is intended as a full and complete response to the Office Action dated January 25, 2007, having a shortened statutory period for response set to expire on April 25, 2007. Applicant has attached a Petition for a Two Month Extension of Time, in accordance with 37 C.F.R. §1.136, extending the statutory period until June 25, 2007. Applicant requests entry and consideration of the above noted amendments and the following remarks in response to the Office Action.

Applicant would like to thank the Examiner for the telephone interview of May 16, 2007.

Claims 21-41 are currently pending in the application. Claims 1-20 have been canceled. Applicant has amended claims 21, 24, 28, 39, and 41. Discussion of the amendments for claims 21, 24, 28, 39, and 41 are below.

Election/Restrictions

The Examiner has identified two patentably distinct species: (i) a catalyst system and process of use comprising a hafnocene-based component and at least one other metallocene component, described in claims 21-30 and 32-41, and (ii) a catalyst system and process of use comprising a hafnocene-based component and at least one other post-metallocene component, described in claims 21-28 and 31-41. The Examiner requested that Applicant elects a species. Applicant confirms the election of species (ii) and has withdrawn claims 29 and 30 from consideration at this time.

Claim Objections

Claims 21, 39, and 41 are objected to for failing to define the type of molecular weight. Applicant points to page 14-15 of the specification (last paragraph of page 14 that runs to the top of page 15) wherein the molecular weight discussed is a weight average molecular weight. Applicant has amended claims 21, 39, and 41 for clarification. Support for such amendments can be found at page 14-15, as identified above.

Claim 24 is objected to for not using the term “non-hydrogen substituent” based on its dependency on claim 22. Applicant has amended claim 24 for clarification. Support for such amendment is at page 5 of the specification, first full paragraph.

Claims 24 and 25 are objected to because the Examiner states that the positioning is arbitrary, unless the hafnocene complex is bridged. Applicant has amended claim 21 to state that the hafnocene-based catalyst component is bridged, therefore withdrawal of this objection is requested.

Claim 28 is objected because the Examiner states that the definition of X is inconsistent. Applicant has amended claim 28 as discussed in the interview for consistency. Support for this amendment can be found in original claim 22.

Claim Rejections

35 U.S.C. § 103(a)

Claims 21-28 and 32-41 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sugimura et al. (U.S. 6,136,743). Claims 21-27, 32, 33, and 36-41 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Canich et al. (U.S. 6,194,341) in view of Winter et al. (U.S. 5,679,811).

Applicant has amended claims 21 and 39 to state that the hafnocene-based catalyst complex is bridged. As discussed in the interview, Applicant respectfully argues that the presently amended claims are patentable over the above cited references for the following reasons. Applicant argues that a bridged hafnocene is not disclosed or taught in Sugimura.

Furthermore, as discussed in the interview, Applicant argues that the activating agent of the present invention does not contain TMA because TMA does not activate hafnocene efficiently, that is the reason why unmodified MAO is not used. Therefore, the use of MAO to activate the metallocene catalyst, as taught in Canich and Winter, teaches away from the presently claimed invention. In addition, a hafnocene generally produces a higher molecular weight polymer than a zirconocene. Therefore, the use of a hafnocene instead of a zirconocene with MAO would not be obvious to one of ordinary skill in the art. Thus, Applicant requests withdrawal of these rejections and allowance of the claims.

Claims 21-24, 31, 34, and 39-41 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Mecking (DE 198 23 871).

Applicant has amended claims 21 and 39 to include a specific molecular weight distribution. Support for such amendment can be found at least at page 15, last paragraph. As discussed in the interview, Mecking does not teach or suggest a molecular weight distribution of from 7 to 20. Applicant respectfully requests withdrawal of this rejection and allowance of the claims.

In conclusion, Applicant submits that the references cited in the Office Action, neither alone nor in combination, teach, show, or suggest the claimed features. Having addressed all issues set out in the Office Action, Applicant respectfully submits that the claims are in condition for allowance and respectfully requests the same.

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Respectfully submitted,

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